



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/585,243

07/13/2006

Hidetoshi Odaka

5404/159

4108

757 7590 06/29/2009  
BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, IL 60610

EXAMINER

LOEWE, ROBERT S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/29/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/585,243	<b>Applicant(s)</b> ODAKA ET AL.	
	<b>Examiner</b> ROBERT LOEWE	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/12/07; 10/18/06; 7/13/06</u>                                | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 4 is objected to because of the following informalities: "which100 parts" on line 3 of claim 4 should be changed to --which 100 parts--.

Claims 8, 10, 11 and 12 are objected to. Specifically, the period at the end of formula 1 (claim 8), formula 2 (claims 10 and 11) and formula 3 (claim 12) should be removed. Also, the parenthesis should be removed in claims 8 and 10-12.

### ***Claim Interpretation***

Claims 5-9 are interpreted as product-by-process claims embedded in an overall process claim. Specifically, any prior art which is believed to teach the limitations of instant claim 1 may be used to reject these claims as well, even if such prior art does not explicitly teach such process steps.

Claims 13 and 14 are product-by-process claims. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Please note MPEP 2113, which addresses the appropriateness of a rejection under 35 U.S.C. 102/103 for product-by-process claims.

Art Unit: 1796

"The Patent Office bears a lesser burden of proof in making out a case of *prima facie* obviousness for product-by-process claims because of their peculiar nature" than when a product is claimed in the conventional fashion. *In re Fessmann*, 489 F.2d 742, 744, 180 USPQ 324, 326 (CCPA 1974). Once the examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289,292 (Fed. Cir. 1983).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Watabe et al. (JP-05059267). For convenience, a certified English-language translation provided by FLS, Inc. will be relied upon in the rejection below.

Watabe et al. teaches a mixture of (A) 30 parts of a polyoxypropylene having a methyldimethoxysilylpropyl terminal group having a molecular weight of 3,200 (viscosity of 620 cps) which is prepared by reaction of a polyoxypropylene monool and a silane coupling agent. (reference example 1), and (B) 100 parts of a silyl-group containing polyoxypropylene having a molecular weight of 30,000 and an average of 2.4 methyldimethoxysilylpropyl groups which is

Art Unit: 1796

prepared by reaction of a polyoxypropylene triol (which has at least two active hydrogen groups) (Table 1, embodiment 1). No plasticizers are present in any of the inventive embodiments of Watabe et al. Applicants have not shown that the process as claimed yields a fundamentally different product than what is taught by Watabe et al. nor have Applicants shown criticality regarding the claimed process.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watabe et al. (JP-05059267). For convenience, a certified English-language translation provided by FLS, Inc. will be relied upon in the rejection below.

Art Unit: 1796

Claim 1: Watabe et al. teaches a curable composition comprising a mixture of (A) a polyoxypropylene ether oligomer/polymer having a molecular weight range of from 300 to 8,000 which is prepared by reacting a polyoxypropylene monool with allylchloride to produce an allyl-terminated polyoxypropylene oligomer/polymer, which is then subsequently reacted to prepare a silyl-terminated polyoxypropylene oligomer/polymer (claim 1 and reference example 1), and (B) a silyl-terminated polyoxypropylene having a molecular weight of from 8,000 to 50,000 which is prepared from a polyoxypropylene triol (claim 1 and embodiments 1 through 3). The difference between the process as taught by Watabe et al. and that which is claimed is as follows: the instant process claims teaches a mixture of a first polyoxyalkylene polymer having at least two active hydrogen groups and a second polyoxyalkylene polymer having one active hydrogen group which is converted to silyl-terminated polyoxyalkylene polymers. The process as taught by Watabe et al. involves the separated preparation of both silyl-capped polyoxyalkylene polymers prior to blending. However, the only discernable difference between that which is claimed and that which is taught by Watabe et al. is a change in the sequence of adding ingredients. However, changing the order of performing process steps is *prima facie* obvious in the absence of new or unexpected results *In re Burhans*, 154 F.2d 690 USPQ 330 (CCPA 1946) see also *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients if *prima facie* obvious). See section MPEP 2144.04 (IV) C.

At the time of the invention, a person having ordinary skill in the art would have found it obvious to prepare the silyl-capped polyoxypropylene mixtures simultaneously from the starting monools and triols as this would expedite the overall process (reduce the number of process steps and the number of purification steps). Further, Watabe et al. explicitly teaches that both silyl-

Art Unit: 1796

capped polymers may be prepared using the same chemistry. It follows that a person having ordinary skill in the art would have a reasonable expectation of success that carrying out the silylation reactions of both polymers at the same time would yield the same result compared with what is explicitly taught by Watabe et al.

Claims 2 and 3: In the reference examples 1 and 2 as taught by Watabe et al., the second oxyalkylene polymer has a molecular weight of 3,200 and 3,000, respectively and the first polyoxyalkylene polymer has a molecular weight of 30,000 (10-times larger). The molecular weight of the second oxyalkylene polymer is approximately  $1/10^{\text{th}}$  that of the first oxyalkylene polymer which would inherently satisfy the limitations of instant claims 2 and 3.

Claim 4: In reference examples 1 and 2, the second oxyalkylene polymer is employed at 30 parts by weight based on 100 parts by weight of the first oxyalkylene polymer, which satisfies the limitation of instant claim 4.

Claims 5-7: While Watabe et al. does not explicitly teach the process steps of instant claims 5-7, Watabe et al. nevertheless renders obvious the starting mixture of process claim 1. Since Watabe et al. renders obvious the claimed **product** mixture of instant claim 1, any process steps not taught by Watabe et al. but otherwise claimed does not remove Watabe et al. as a prior art reference. Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ

Art Unit: 1796

964, 966 (Fed. Cir. 1985). Please note MPEP 2113, which addresses the appropriateness of a rejection under 35 U.S.C. 102/103 for product-by-process claims.

Claims 8 and 9: Watabe et al. teaches that the second polyoxyalkylene polymer is prepared using 2-ethylhexanol as an initiator (which satisfies formula 1 of instant claim 1) using a double metal cyanide complex catalyst, which satisfies instant claim 9 (reference example 1).

Claim 10: Watabe et al. further teaches converting reacting the polyoxypropylene monool with allyl chloride, which satisfies formula 2 of instant claim 10 (reference example 1).

Claim 11: Watabe et al. further teaches the preparation of the silyl-terminated polyoxypropylene by reaction with an allyl-terminated polyoxypropylene (reference example 1).

Claim 12: Watabe et al. also teaches that the silyl-group may be introduced by reacting a polyoxypropylene monool (or polyol) with an isocyanatoalkyltrialkoxysilane, which satisfies instant claim 12 (paragraph 0024).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned



Art Unit: 1796

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-9 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 7,423,111 in view of Watabe et al. (JP-05059267). Specifically, the only difference between instant claims 1-9 and claims 1-9 of the '111 patent is the conversion of the active hydrogen groups to hydrolyzable silicon groups. However, such reaction chemistry is well-known in the art. For example, Watabe et al. teaches a curable composition comprising silyl-terminated polyoxypropylenes. Watabe et al. teaches that polyether main chain polymers are particularly useful as room temperature curable compositions which have good pliability even at low temperatures, making them useful as sealing materials and bonding agents (paragraph 0003). Patent '111 and Watabe et al. are combinable because they are from the same field of endeavor, namely polyoxyalkylene polymer compositions. At the time of the invention, a person having ordinary skill in the art would have found it obvious to prepare silyl-terminated polyoxypropylene compositions from the compositions taught by the '111 patent and would have been motivated to do so given the teachings of Watabe et al. (paragraph 0003).

#### ***Relevant Art Cited***

The prior art made of record and not relied upon but is considered pertinent to applicants disclosure can be found on the attached PTO-892 form.

Art Unit: 1796

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Loewe whose telephone number is (571) 270-3298. The examiner can normally be reached on Monday through Friday from 5:30 AM to 3:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./  
Examiner, Art Unit 1796  
22-Jun-09

/Randy Gulakowski/  
Supervisory Patent Examiner, Art Unit 1796